REMARKS

A Petition for Extension of Time is being filed with this reply. Thus, this reply is being timely filed.

Applicants respectfully request the Examiner to reconsider the present application in view of the foregoing amendments to the claims.

Status of the Claims

In the present Amendment, claims 1, 2, 8, 9, 15, 16, 22, 25, 28, 29, 30, 37, 41, 42 and 43 have been amended. Also, claims 3-5, 10-12, 17-19, 23, 24, 26, 27, 31, 32, 38, 39, 54 and 60 were previously canceled without prejudice or disclaimer of the subject matter contained therein. Thus, claims 1, 2, 6-9, 13-16, 20-22, 25, 28-30, 33-37, 40-53, 55-59 and 61-63 are pending in this application.

No new matter has been added by way of these amendments. All amendments actually delete subject matter.

Based upon the above considerations, entry of the present amendment is respectfully requested.

In view of the following remarks, Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims. Applicants' previous arguments are rendered moot in view of the new grounds of rejections (see the bottom of page 6 of the Office Action).

Claim Objection

Claim 37 stands objected under 37 C.F.R. § 1.75 as being a substantial duplicate of claim 2. Applicants respectfully traverse, and refer the Examiner to the scope of these two claims. These claims do not overlap in scope, and/or are not considered duplicates of one another. Reconsideration and withdrawal of this objection are respectfully requested.

Issues under 35 U.S.C. § 103(a)

Claims 1, 2, 6-9, 13-16, 20-22, 25, 28-30, 35-37, 40-53, 55-59 and 61-63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tai (U.S. Patent No. 5,013,557; hereinafter referred to "Tai '557") in view of Kawakami *et al.* (*J. Bioorganic & Med. Chem. Lett.*, Vol. 4, pp. 1429-1446 (1996); "Kawakami") (see pages 3-4 of the Office Action).

Also, claims 33-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tai '557 in view of Kawakami as applied above, and further in view of Morikazu *et al.* (JP 4-346937; hereinafter "JP '937") (see pages 4-5 of the Office Action).

Further, claims 1, 2, 6-9, 13-16, 20-22, 25, 28-30, 35-37, 40-53, 55-59 and 61-63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Diehl (U.S. Patent No. 5,612,026; hereinafter "Diehl '026") in view of JP '937 (see pages 5-6 of the Office Action).

Applicants respectfully traverse, and reconsideration and withdrawal of these rejections are respectfully requested.

(A) The Rejection in View of Tai '557 and Kawakami

The Office Action indicates that Tai '557 fails to disclose donepezil hydrochloride as an active ingredient (see the Office Action at page 3). Kawakami is cited for its disclosure of donepezil hydrochloride, wherein the Examiner refers Applicants to the disclosure of "E2020" in Kawakami. However, citing Kawakami and further combining the disclosure of this reference with that of Tai '557 are improper.

(i) Known bitter taste of donepezil hydrochloride

First, Applicants note the priority date of the present application, wherein the PCT International Application was filed in the 1998 and the Japanese priority applications were filed in 1997. Second, Applicants respectfully submit that one of ordinary skill in the art was not aware of the bitter or unpleasant taste of donepezil hydrochloride before these dates, or even before August of 2000. In other words, it was not known in the art as of at least the filing date of the present application or of the filing dates of the priority applications, that donepezil hydrochloride had a bitter or unpleasant taste that needed masking.

ARICEPT, a tradename of donepezil hydrochloride, was admitted in November, 1996, by the FDA in the form of a film tablet. This dosage form is a tablet that is coated with film, and for this reason there is no unpleasant, bitter taste to the patient ingesting the film tablet. It was not until later that it was discovered that donezepil hydrochloride even had the bitter taste.

Thus, the requisite motivation is lacking with regard to the Examiner's combination of Tai '557 and Kawakami and a *prima facie* case of obviousness has not been established. *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). Applicants note that three

possible sources of motivation to combine references: the nature of the problem to be solved, the teaching of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet,* 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Here, the nature of the problem (e.g., bitter taste) was not known yet, the teaching of the references is that neither reference discloses "E2020" has a bitter taste, and a person of ordinary skill in the art does not realize donezepil hydrochloride even has an unpleasant taste. The Examiner's reasons for combining Tai '557 and Kawakami in the paragraph bridging pages 3-4 of the Office Action are thus improper. Accordingly, under *Vaeck* and *Rouffet*, *supra*, the requisite motivation is lacking. Withdrawal of this rejection is respectfully requested.

(ii) The ion complex of the present invention

The present invention is directed to administering donepezil hydrochloride together with the specific acid polysaccharide(s) (see, e.g., claim 1 herein). Donepezil hydrochloride is basic in property and is positively charged. The acidic polysaccharides as instantly claimed are acidic in nature and thus have are negatively charged. Specifically, the instantly claimed acidic polysaccharides have divalent sulfate groups and are strongly acidic. The acidic component then forms an ion complex with the basic donepezil hydrochloride.

Thus, the present invention is directed to a composition or administration thereof that involves an ion complex between the active ingredient and the acidic polysaccharide, and therefore masks any unpleasant taste of donepezil hydrochloride. Applicants further note that the acidic polysaccharides are not sweet in taste. In other words, the present invention works by

forming the mentioned ion complex as a way of masking the bitter taste of donepezil hydrochloride.

(iii) Tai '557 and Kawakami still fail to disclose the present invention

The Office Action indicates that Tai '557 fails to disclose donepezil hydrochloride as an active ingredient (see the Office Action at page 3). Kawakami is cited for its disclosure of donepezil hydrochloride. However, Kawakami as a secondary reference merely discloses the molecular structure of donepezil hydrochloride and at the same time fails to disclose anything regarding a proper formulation for a medicinal administration or regarding the taste thereof. Thus, while Applicants understand why Kawakami is cited, Applicants respectfully submit it is improper to combine this reference with Tai '557. This is because, e.g., "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." Here, the Examiner admits Tai '557 does not disclose donepezil hydrochloride, and Kawakami *et al.* does not disclose an unpleasant taste of E2020 or any type of administration of donepezil hydrochloride. Thus, the requisite motivation is lacking for this reason as well. *Vaeck; supra.*

The Examiner states that the motivation to combine the two references lies in how to solve the problem of the bitter taste of the active ingredient. However, as discussed above, Applicants note that the state of the art is such that it was not known that donepezil hydrochloride has an unpleasant taste before the present application was even filed. Thus, Tai '557 or Kawakami cannot teach or suggest solving a problem in the art that is not known yet.

Again, the Examiner also states that the problem to be solved is solving the bitter taste of the active ingredient. However, Applicants question the source of this problem, other than the disclosure in Applicants' specification. The cited Kawakami reference does not refer to donepezil hydrochloride having such a problem. Thus, Applicants respectfully that the USPTO has, therefore, relied on an impermissible level of "hindsight reconstruction" as a basis of support of the instant rejection. *See Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988) ("Care must be taken to avoid hindsight reconstruction by using 'the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.'") (internal citation omitted); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.").

In addition, Applicants note: "An invention is 'obvious to try' 'where the prior art [gives] either no indication of which parameters [are] critical or no direction as to which of many possible choices is likely to be successful.' *See Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843, 1845 (Fed. Cir. 1989) (citing *In re O'Farrell* , 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988))." Here, the claimed invention is achieved only when an "obvious to try" rationale is applied since the cited references, including Kawakami *et al.*, give either no indication of which parameters are critical or no direction as to which of many possible choices is likely to be successful. Using the rationale of solving bitter taste means a multitude of references could be applied without relying on any particular disclosure (in either Tai '557 or Kawakami).

(iv) The proposed embodiment of Tai '557 plus Kawakami *et al.*

In addition, the reasonable expectation of success is lacking for several other reasons.

The cited Tai '557 reference shows a spraying-dried product including sucralfate (see Abstract; Col. 4, lines 59+; see also the various claims in the reference). More specifically, it is seen in the Tai '557 reference that the unpleasant taste-masking action is caused by a matrix imposed on microcapsules (B), referred to in column 5 or in its claim 9 at column 25. The matrix (B) includes sugar alcohols as a bulking sweet agent (claim 15), and a hydrophobic lubricating agent (see, e.g., claim 1). The spraying-dried product delivers the medicine component slowly in the mouth out of the outer layer because of the hydrophobic lubricating agent. Thus, the (sweet) bulking agent is delivered in the mouth before the medicine component, which masks the unpleasant taste of the medicine component. This is not the present invention as claimed.

In the present invention, upon oral administration, the electric interaction is produced which masks the bitter taste of the basic medicine. The cited Tai '557 reference fails to show the combination of the instantly claimed invention, as well as the claimed electric interaction.

Still, the Examiner refers Applicants to the sulcralfate compound disclosed in Tai '557 (the Examiner refers to the sucralfate disclosed in Tai '557 at page 3 of the Office Action). However, the cited primary reference of Tai '557 discloses sucralfate having a bitter taste in the form of microcapsules with a polymer dissolving in the stomach, wherein the polymer is agar, carrageenan or xanthan. As support of the present explanation, Applicants herein include the chemical formulae of carrageenan, sucralfate and xanthan gum (xanthan gum is discussed below for the rejection in view of Diehl '026 and JP '937). The sucralfate of Tai '557 is a basic aluminum sucrose sulfate, and is thus negatively charge. In other words, no ion complex is

formed in the cited Tai '557 reference (versus that of the present invention), or when the Tai '557 embodiment is combined with the Kawakami disclosure.

Further, in Tai '557, alginic acid gels with aluminum metal of sucralfate and then water can be absorbed. The sucralfate is thus in the gel and any possible taste-masking property is not due to the formation of an ion complex. This is unlike the present invention as explained above and one of ordinary skill in the art would not combine the cited disclosures in an effort to achieve the present invention. In fact, the present invention would not be achieved (e.g., no ion complex formed; both components are negatively charged).

(v) Conclusion

Thus, this rejection in view of Tai '557 and Kawakami *et al.* has been overcome for any and all reasons stated above. Reconsideration and withdrawal of this rejection are respectfully requested.

(B) The Rejection in View of Tai '557, Kawakami and JP '937

Claims 33 and 34 are at issue, wherein these claims depend on claim 22 or claim 1. The combination of Tai '557 and Kawakami *et al.* as being improper is discussed above. The further citation of JP '937 does not make the instant combination of all three references any more proper. Applicants respectfully submit that subsections (i)-(iv) of section (A) above apply to this rejection as well, wherein this rejection is improper.

The cited JP '937 reference discloses a combination of a material having an unpleasant taste, a gelling agent (e.g., agar, gelatin or κ-carrageenan) and a taster to obtain a jelly and reduce the bitter taste thereof. Nothing, however, is disclosed in the JP '937 examples about basic medicines. All of the exemplified medicines in JP '937 are acidic, such as that in Example 1 (tannic acid). Applicants also note Example 2 (Chinese medicine of an acidic herbal mixture) and Example 3 (soybean protein). These compounds are negatively charged, and not positively charged. Thus, there is no ion complex formed in JP '937 like the present invention, making the disclosure in this secondary reference the same as Tai '557 as explained above (see section (iv) above). As also explained in subsection (ii) above, the present invention involves a negatively charged donepezil hydrochloride forming an ion complex with the negatively charged acidic polysaccharide. The present invention would not be achieved (e.g., no ion complex formed; both components are negatively charged), and the requisite motivation and/or reasonable expectation of success are lacking. *Vaeck; supra.*

Accordingly, this rejection in view of Tai '557, Kawakami *et al.* and JP '937 has been overcome for any and all reasons stated above. Reconsideration and withdrawal of this rejection are respectfully requested.

(C) The Rejection in View of Diehl '026 and JP '937

The cited primary reference of Diehl '026 discloses a drink mix composition containing an anion exchange resin, xanthan as a gelling agent and an edible water-soluble salt, disclosing polysaccharide as the Examiner points out. At column 5, lines 40-55, Diehl '026 also discloses:

"The present composition may optionally contain one or more sweetening agents. Sweetening agents include saccharides, . . . polysaccharides such as xylose, ribose, glucose . . ." Thus, Diehl '026 discloses using a sweetener of a polysaccharide. There is no disclosure in the primary reference of the instantly claimed acidic polysaccharide, nor is there any suggestion regarding the ion complex that forms with the present invention (see subsection (ii) above). And as discussed above, the disclosure in JP '937 would not make this rejection any more proper. There is even no ion complex formed in JP '937 like the present invention, making the disclosure in this secondary reference as deficient as Diehl '026. Thus, the requisite motivation and/or reasonable expectation of success are lacking. *Vaeck; supra.*

Therefore, this rejection in view of Diehl '026 and JP '937 has been overcome for any and all reasons stated above. Reconsideration and withdrawal of this rejection are respectfully requested.

Conclusion

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Eugene T. Perez, Reg. No. 48,501, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: December 1, 2006

Respectfully submitted,

By _____

Marc S. Weiner
Registration No.: 32,181
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road, Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant

Attachments: Chemical formula of carrageenan
Chemical formula of sucralfate
Chemical formula of xanthan gum

カラギーナン

(Carrageenan)

1．一般名

USP：Carrageenan

JPE：Carrageenan

2．別名

Chondrus extract；E407；*Gelcarin*；irish moss extract；*SeaSpen. PF*；*Viscarin*®.

3．化学名およびケミカルアブストラクツ登録番号

Carrageenan [9000-07-1]

κ-Carrageenan [11114-20-8]

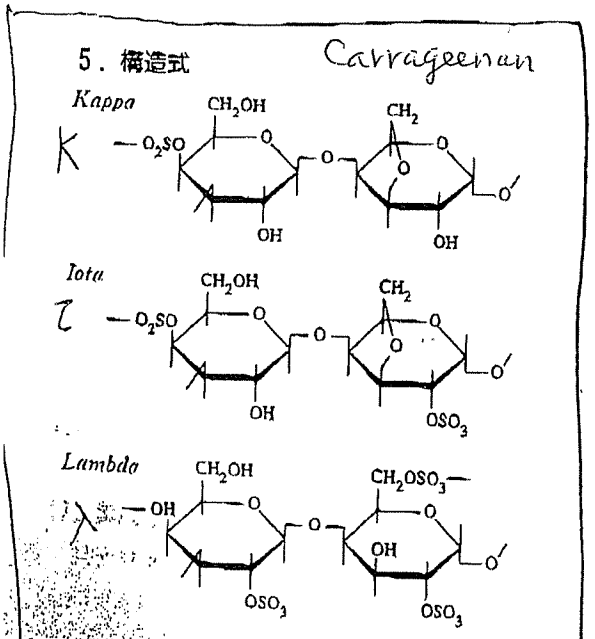
λ-Carrageenan [9064-57-7]

4．示性式および分子量

USPはガラクトースと3,6-無水ガラクトース共重合体の種々の硫酸エステルと記述している．糖が*α*-1,3と*β*-1,4の位置に交互に連接している．

5．構造式

Carrageenan



カラギーナンには3つの趣味ある型があるので，これらの構造上の区別が大切である．[illegible]ラギーナンはゲル化しないポリマーで重量で約35%の硫酸エステルを含み3,6-無水ガラクトースはない．

ι-カラギーナンはゲル化するポリマーで，重量で約32%の硫酸エステルと約30%の3,6-無水ガラクトースを含む．

κ-カラギーナンは強いゲル化のポリマーで，重量で約25%の硫酸エステルと約34%の3,6-無水ガラクトースを含む．

6．用途分類

ゲル化基剤，懸濁剤，徐放錠のマトリックス．

7．医薬品製剤への応用

カラギーナンは大抵の注射剤以外の剤形，すなわち懸濁液(湿潤かつ再構築し得るもの)，局所ゲル，点眼液，坐剤，錠剤およびカプセル剤に用いることができる．

懸濁製剤には通常，*ι*および*λ*のカラギーナンが用いられる．*λ*-カラギーナンの0.7%あるいはそれ以下のものは液が粘性となる．*ι*-カラギーナンを用いると変形した薄いチキソトロピー的なゲル（thixotropic gel，揺変形ゲル）が生じるが振ると容易に流すことができる．*ι*-カラギーナンを用いてゲルのネットワークをつくるのにはカルシウムイオンの存在が必要とされる．大抵の懸濁液には純粋な*ι*-カラギーナンに約0.4%カルシウムを添加することが必要である．

もし*Sea Spen PF*を用いるならば約0.75%必要である．しかし既に製品中にカルシウムが存在していればゲル化の割合を支配するためのカルシウムの添加は必要ではない．PeppasとReillyはカラギーナンおよび他のコロイドについて薬剤の喉頭-咽頭部に粘着する効果について研究し[1]，*λ*-カラギーナンがカラギーナンの中では最大の粘着傾向があることを見出した．

FMCの文献て
薬剤の放出をお
る．Lev et al.
を局所ゲル基剤
とを実験した．
カラギーナンを
相互作用によ
とを示唆してい
よび*ι*-3つの
最も拡散しや
たゲルとなっ
ンが一番大量
造を形作るた
-カラギーナン
カリウムが必
薬剤の徐放
ギーナンに関
る．Caramell
ギーナンの複
アゼムのよう
剤化している
添加剤につい
の錠剤へ圧縮
されていない
わずかの包囲
またはカリウ
剤の放出を抑
菓子の感触
錠）にカラヨ
ある．[6,7]この
的な水分の
カラギーナ
ることが必
用いられる．

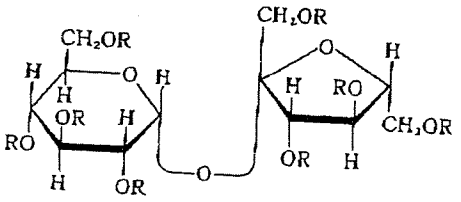
8．性状

カラギー
は黄褐色か
い粉末で，

スクラルファート

Sucralfate

ショ糖硫酸エステルアルミニウム塩



$\cdot xAl(OH)_3 \cdot yH_2O$

$R=SO_3Al(OH)_2$

$C_{12}H_{30}Al_8O_{51}S_8 \cdot xAl(OH)_3 \cdot yH_2O$

本品は定量するとき，換算した乾燥物に対し，アルミニウム（Al：26.98）17.0 ～ 21.0 %　及びショ糖オクタ硫酸エステル（$C_{12}H_{22}O_{35}S_8$：982.81）として　34.0 ～ 43.0 % を含む．

性　状　本品は白色の粉末で，におい及び味はない．

本品は水，熱湯，エタノール又はエーテルにほとんど溶けない．

本品は希塩酸又は硫酸・水酸化ナトリウム試液に溶ける．

確認試験

（1）　本品 0.05 g を小試験管にとり，金属ナトリウムの新しい切片 0.05 g を加え，注意しながら加熱融解し，直ちに水 100 mL の中に入れ，小試験管を割り，よく振り混ぜた後，ろ過する．ろ液 5 mL にニトロプルシドナトリウム試液 1 滴を加えるとき，液は赤紫色を呈する．(注1)

（2）　本品 0.040 g を希硫酸 2 mL に溶かし，アントロン試液 2 mL を穏やかに加えて二層とするとき，境界面は青色を呈し，徐々に青緑色に変わる．(注2)

（3）　本品 0.5 g を希塩酸 10 mL に溶かした液は，アルミニウム塩の定性反応を呈する．

純度試験

（1）　溶状　本品 1.0 g を希硫酸 10 mL に溶かすとき，液は無色澄明である．

（2）　塩化物　本品 0.5 g を希硝酸 30 mL に溶かし，沸騰するまで穏やかに加熱する．冷後，水を加えて 100 mL とし，この液 10 mL に希硝酸 3 mL 及び水を加えて 50 mL とする，これを検液とし，試験を行う．比較液には 0.01 mol/L 塩酸 0.70 mL を加える（0.50 % 以下）．(注3)

（3）　重金属　本品 1.0 g をとり，塩化ナトリウム溶液（1 → 5）20 mL 及び希塩酸 1 mL を加えて溶かし，これに希酢酸 2 mL 及び水を加えて 50 mL とする，これを検液とし，試験を行う．比較液は希塩酸 1 mL を水浴上で蒸発乾固し，これに塩化ナトリウム溶液（1 → 5）20 mL，希酢酸 2 mL，鉛標準液 2.0 mL 及び水を加えて 50 mL とする（20 ppm 以下）．

（4）　ヒ素　本品 1.0 g をとり，希塩酸 5 mL に溶かし，これを検液とし，装置 B を用いる方法により，試験を行う（2 ppm 以下）．

（5）　遊離アルミニウム　本品 3.0 g に水 50 mL を加え，水浴中で 5 分間加熱し，冷後，ろ過し，残留物を水 5 mL ずつで 4 回洗い，ろ液及び洗液を合わせ，希塩酸 2 mL を加え，水浴中で 30 分間加熱する．冷後，水酸化ナトリウム試液を加えて中和し，水を加えて正確に 100 mL とし，試料溶液とする．試料溶液 50 mL を正確に量り，0.05 mol/L エチレンジアミン四酢酸二ナトリウム液 25 mL を正確に加え，pH 4.5 の酢酸・酢酸アンモニウム緩衝液 20 mL を加えた後，5 分間煮沸し，冷後，エタノール 50 mL を加え，過量のエチレンジアミン四酢酸二ナトリウムを 0.05 mol/L 酢酸亜鉛液で滴定する（指示薬：ジチゾン試液 3 mL）．ただし，滴定の終点は液の緑紫色が紫色を経て赤色に変わるときとする．同様の方法で空試験を行う（0.2 % 以下）．

0.05 mol/L エチレンジアミン四酢酸二ナトリウム液 1 mL ＝ 1.3491 mg Al

（6）　類縁物質　定量法（2）ショ糖オクタ硫酸エステルで得られた試料溶液 50 μL につき，定量法（2）ショ糖オクタ硫酸エステルを準用し，液体クロマトグラフ法により試験を行う．試料溶液のショ糖オクタ硫酸エステルのピーク面積及びショ糖オクタ硫酸エステルのピークに対する相対保持時間が約 0.7 の類縁物質のピーク面積を自動積分法により測定し，ショ糖オクタ硫酸エステルのピーク面積に対する類縁物質のピーク面積を求めるとき，0.1 以下である．(注4)

検出感度：定量法（2）ショ糖オクタ硫酸エステルで得られた標準溶液 50 μL から得たショ糖オクタ硫酸エステルのピーク高さがフルスケールの 60 ～ 100 % になるように調整する．

乾燥減量　14.0 % 以下（1 g，105 °C，3 時間）．(注5)

酸　力　本品を乾燥し，その約 0.25 g を精密に量り，200 mL の共栓三角フラスコに入れ，0.1 mol/L 塩酸 100 mL を正確に加え，密栓して 37 ± 2 °C で正確に 1 時間振り混ぜ（振とう速度毎分 150 回，振幅 20 mm）た後，5 分間水冷する．上澄液 10 mL を正確に量り，過量の酸を 0.1 mol/L 水酸化ナトリウム液で pH 3.5 になるまで滴定する．同様の方法で空試験を行う．本品 1 g につき，0.1 mol/L 塩酸の消費量は 130 mL 以上である．

P馬製粉)

001208

methylbicyclo[2,
anone.

$C_{10}H_{16}O$：152.24
a, 結晶性の粉末
nphora Linnéから
まわずかに苦く,
レエーテル又は二
こくい. 室温で徐

lS No. 76-22-2
$\alpha]_D^{20}$：+41.0～+
融点：177～182℃.
不揮発性残留物

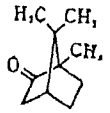
清涼化剤, 芳香剤
0.05mg, 眼科用剤
img, その他の外用

レ (日本精化)

001209

hylbicyclo[2,2,1]-
nanone.

【構造】



及び鏡像異性体

$C_{10}H_{16}O$：152.24

【概要】 無色又は白色半透明の結晶, 結晶性の粉末又は塊. 合成品でラセミ型. 特異な芳香があり, 味はわずかに苦く, 清涼味. エタノール (95), ジエチルエーテル又は二硫化炭素に溶けやすく, 水に溶けにくい. 室温で徐々に揮散する.

【参考文献】 日局, EP

【日局】 含量 96.0%以上. 旋光度 $[\alpha]_D^{20}$：−1.5～+1.5°(5g, エタノール(95), 50mL), 融点：175～180℃. 水分, 塩素化合物共に限度内. 不揮発性残留物 2.0g 中 1.0mg以下.

【貯法】 気密容器

【用途】 矯味剤, 着香剤・香料, 清涼化剤, 芳香剤, 溶解剤, 防腐剤

【投与経路・最大使用量】 経口投与 18mg. 一般外用剤 10mg/g, 眼科用剤 0.1mg/g, 殺虫剤

【商品名 (メーカー)】 dl-カンフル (日本精化)

【キ】

希塩酸

001114

【英名】 Dilute Hydrochloric Acid

【別名】 Diluted Hydrochloric Acid (NF, BP, EP)

【構造】

HCl：36.46

【概要】 無色の液. においはなく, 強い酸味がある.

【参考文献】 日局, NF, EP, CAS No. 7647-01-0 (Hydrochloric Acid)

【日局】 含量 塩化水素9.5～10.5w/v%. 比重 d_{20}^{20}：約1.05. 硫酸塩, 亜硫酸塩, 臭化物又はヨウ化物, 臭素又は塩素 いずれも限度内. 重金属 3ppm以下. ヒ素 0.5ppm以下. 水銀 0.01ppm以下. 強熱残分 10mL中 1.0mg以下.

【貯法】 気密容器

【用途】 安定(化)剤, 可溶(化)剤, 緩衝剤, 矯味剤, pH調節剤, 溶解剤, 溶解補助剤

【投与経路・最大使用量】 経口投与 0.02mL. 静脈内注射 26.25μL, 筋肉内注射 12μL, 皮下注射 12μL, 局所麻酔注射 4.2μL.

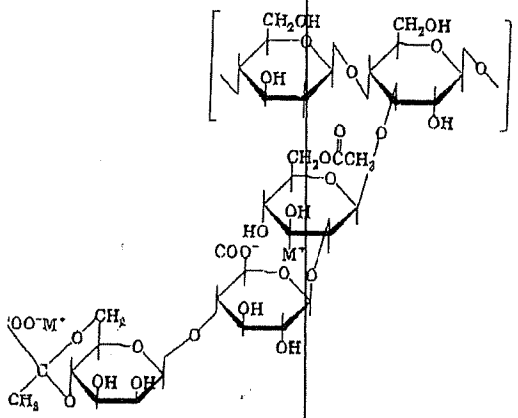
キサンタンガム

109058

【英名】 Xanthan Gum

【別名】 ザンタンガム

【構造】



M^+=Na, K, 1/2Ca

【概要】 炭水化物をキサントモナス属菌 (*Xanthomonas campestris*) を用いて発酵させ, 精製した後, 乾燥し, 粉砕したもので, 主としてD-グルコース, D-マンノース, D-グルクロン酸のナトリウム, カリウム及びカルシウム塩からなる多糖類である. 帯黄白色～淡黄褐色の粉末. わずかに特異なにおいがある. 水又は熱湯に溶けやすく, エタノール (95) 又はジエチルエーテルにほとんど溶けない. pH 5.0～8.0 (1.0g→100mL).

【参考文献】 薬添規, 食添, NF, EP, CAS No. 11138-66-2

【薬添規】 粘度 600mPa・s以上 (3.00g, 塩化カリウム 3g+水 294g, 25℃), 25℃及び 65℃における粘度を V_1 及び V_2, V_1/V_2 は 1.02～1.45. 溶状 0.5g, 熱湯 100mL, 不溶物を認めない. 重金属 20ppm以下. ヒ素 2ppm以下. 乾燥減量 15.0%以下 (2g, 105℃, 3時間). 灰分 5.5～16.0%. ピルビン酸含量 限度内.

【貯法】 密閉容器

【用途】 安定(化)剤, 基剤, 懸濁(化)剤, 粘着増強剤, 粘稠剤, 粘稠化剤

【投与経路・最大使用量】 経口投与 240mg. 一般外